Grade 5 Math
Subclaim: Reasoning

The standard designation is included preceding each evidence statement.
Evidence Statements may:
1. Use exact standard language
2. Be derived by focusing on specific parts of a standard
3. Be integrative - the testing of more than one of the standards on a single item/task without going beyond the standards to create new requirements

Evidence Statements	Clarifications	Relationship to Mathematical Practices
Reasoning (C)		
5.C.1-1 Base explanations/reasoning on place value and/or understanding of operations. Content Scope: Knowledge and skills articulated in 5.NBT.6	●Tasks do not have a context.	MP.3, MP.5, MP.6, MP.7
5.C.1-2 Base explanations/reasoning on the properties of operations. Content Scope: Knowledge and skills articulated in 5.NBT.7	●Tasks do not have a context. ●Students need not use technical terms such as commutative, associative, distributive, or property. ●Unneeded parentheses should not be used. For example, use 4 + 3 x 2 rather than 4 + (3 x 2).	MP.3, MP.6, MP.7, MP.8
5.C.1-3 Base explanations/reasoning on the properties of operations. Content Scope: Knowledge and skills articulated in 5.MD.5a	●Students need not use technical terms such as commutative, associative, distributive, or property.	MP.2, MP.3, MP.6, MP.7
5.C.2-1 Base explanations/reasoning on the relationship between multiplication and division. Content Scope: Knowledge and skills articulated in 5.NBT.6		MP.3, MP.5, MP.6, MP.7
5.C.2-2 Base explanations/reasoning on the relationship between addition and subtraction or the relationship between multiplication and division. Content Scope: Knowledge and skills articulated in 5.NBT.7		MP.3, MP.6, MP.7
5.C.2-3 Base explanations/reasoning on the relationship between multiplication and division. Content Scope: Knowledge and skills articulated in 5.NF.3, 5.NF.4a		MP.2, MP.3, MP.6, MP.7

5.C.2-4 Base explanations/reasoning on the relationship between multiplication and division. Content Scope: Knowledge and skills articulated in 5.NF.7		MP.3, MP.5, MP.6, MP.7
5.C.3 Reason about the place value system itself. Content Scope: Knowledge and skills articulated in 5.NBT.A	●Tasks do not involve reasoning about place value in service of some other goal (e.g., to multiply multi-digit numbers). Rather, tasks involve reasoning directly about the place value system, in ways consistent with the indicated content scope.	MP.3, MP.6, MP.7
5.C.4-1 Base arithmetic explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response), connecting the diagrams to a written (symbolic) method. Content Scope: Knowledge and skills articulated in 5.NF.2		MP.3, MP.5, MP.6
5.C.4-2 Base arithmetic explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response), connecting the diagrams to a written (symbolic) method. Content Scope: Knowledge and skills articulated in 5.NF.4b		MP.2, MP.3, MP.5, MP.6
5.C.4-3 Base arithmetic explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response), connecting the diagrams to a written (symbolic) method. Content Scope: Knowledge and skills articulated in 5.NBT.6		MP.3, MP.5, MP.6
5.C.4-4 Base arithmetic explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response), connecting the diagrams to a written (symbolic) method. Content Scope: Knowledge and skills articulated in 5.NBT.7		MP.3, MP.5, MP.6
5.C.5-1 Base explanations/reasoning on a number line diagram (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 5.NF.2		MP.2, MP.3, MP.5, MP.6, MP.7
5.C.5-2 Base explanations/reasoning on a number line diagram (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 5.NF.4a		MP.3, MP 6, MP.7

5.C.5-3 Base explanations/reasoning on a number line diagram (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 5.NF.7a, 5.NF.7b		MP.3, MP.5, MP.6, MP.7
5.C.6 Base explanations/reasoning on concrete referents such as diagrams (whether provided in the prompt or constructed by the student in her response). Content Scope: Knowledge and skills articulated in 5.MD.C		MP.3, MP.5, MP.6
5.C.7-1 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 5.NF.2		MP.3, MP.6, MP.7
5.C.7-2 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 5.NF.2		MP.3, MP.6, MP.7
5.C.7-3 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 5.NF.1		MP.3, MP.6
5.C.7-4 Distinguish correct explanation/reasoning from that which is flawed, and – if there is a flaw in the argument – present corrected reasoning. (For example, some flawed 'student' reasoning is presented and the task is to correct and improve it.) Content Scope: Knowledge and skills articulated in 4.NBT, 4.NF.A, 4.NF.B	●Tasks may have scaffolding 1 , if necessary, in order to yield a degree of difficulty appropriate to Grade 5.	MP.3, MP.6

5.C.8-2 Present solutions to multi-step problems in the form of valid chains of reasoning, using symbols such as equals signs appropriately (for example, rubrics award less than full credit for the presence of nonsense statements such as 1 + 4 = 5 + 7 = 12, even if the final answer is correct), or identify or describe errors in solutions to multi-step problems and present corrected solutions. Content Scope: Knowledge and skills articulated in 5.MD.5c	●Multi-step problems must have at least 3 steps	MP.3, MP.5, MP.6